Synopsis

Ph.D. in Special Education

"ASSESSMENT OF WRITTEN LANGUAGE SKILLS OF STUDENTS WITH HEARING IMPAIRMENT IN SPECIAL AND INCLUSIVE SCHOOLS AND EFFECT OF INTERVENTIONAL STRATEGIES"

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Submitted to

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December 2022

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ASSESSMENT OF WRITTEN LANGUAGE SKILLS OF STUDENTS WITH HEARING IMPAIRMENT IN SPECIAL AND INCLUSIVE SCHOOLS AND EFFECT OF INTERVENTIONAL STRATEGIES

1.0 Introduction

1.0.1 Disabled and their educational programmes: Initiatives

India has witnessed a phenomenal expansion of educational opportunities in the post-independence period. The articles 14, 15, 45 and 46 of the Indian constitution guarantees right to education for all individuals in an appropriate environment irrespective of caste, color, sex, religion, socio-economic background, region or any disability. The 86th amendment to the Constitution of India and the recent Right to Education Act (2009) have made primary education as a fundamental right to every child in the country. The National Policy on Education (1986) and it's Programme of Action (1992) helped the country in reaching the unreached population in both rural an urban areas. The Persons with Disabilities Act (equal opportunities, protection of rights and full participation) 1995 and the recent Rights Persons with disabilities Bill (2016) direct the Government and local authorities to ensure barrier free education to all children with disabilities in an appropriate environment. Also, India's flagship programmes like literacy mission, District Primary Education Programme (DPEP), and Sarva Shiksha Abhiyan (SSA,2002) and Rashtriya Madhyamik Shiksha Abhiyan(RMSA, 2009) have been implemented to achieve the

In India, out of the 121 crore population, 2.68 crore persons are 'disabled' which is 2.21% of the total population. Among the total disabled persons, 45% are illiterates. 13% of the disabled population has matric/ secondary education but are not graduates and 5% are graduates and above. Nearly 8.5% among the disabled literates are graduates(Census, 2011) . The report further reveals that the number of disabled persons is highest in the age group 10-19 years (46.2 lakhs). The Census 2011 showed that, 61% of the disabled children aged 5-19 years are attending educational institution. As per the census report, out of the total disabled in the age group 0-19 years, 20% are

having disability in hearing. The National Sample Survey Report (2003) revealed that, the literacy rate amongst speech and hearing disabled is only 23.3 % up to primary, 6.3 % up to middle school and 4.4 % up to secondary and above. All these influenced the government to bring in more action oriented education programmes to enrol children with disabilities including CWHI in schools.

The education of students with hearing impairment (SWHI) is offered in two major educational setups namely ;(i) special and(ii) inclusive / mainstream schools. Special schools were established to meet the special educational needs of SWHI. As special schools are less in number and find it hard to provide education to the vast majority of disabled, integrated education emerged in the end of twentieth century to mainstream SWHI. The special schools prepared their children and integrated them to mainstream schools for further education. However the number of SWHI integrated were very minimal. Integrated education due to its inherent constraints associated with the program too could not improve the enrollment and retention of SWHI.

The concept inclusive/mainstream education set up its roots in India in the present century to achieve the dream of educating all children (with and without disabilities) under one roof and to equalize the educational opportunities for them. The action plan for Children and Youth with Disabilities (2005), The National Policy of Persons with disabilities (2006) and The Rights of Persons with disabilities Act (2016) recommend that the government funded as well as recognized institutions will have to provide inclusive/mainstream education to the children with disabilities including SWHI . With all these efforts, today, children with disabilities including SWHI are getting education from both special an inclusive/mainstream schools

1.0.2 Challenges in education of SWHI in schools

Hearing loss in children interferes with their hearing and speech perception abilities, which in turn result in delayed language and speech development (Curtiss, 1998). As language acquisition is an auditory dependant phenomenon, hearing loss in children prevents them from acquiring and utilizing the language in his/her life. This language and speech delay in turn affects the communication abilities of SWHI. Hence,

language is deliberately taught and developed in these children through various specialized methods like natural, structural and combined and techniques like Visits, Directed Activities etc. The knowledge of spoken language in these children is qualitatively and quantitatively different. Hence, most of the children with hearing impairment enroll special/mainstream schools with a weak language foundation. Some of them compensate for the lost years through remedial language development programmes while others continue their schooling with the same weak foundation. As years pass by, linguistic demand for learning increases and this leaves a huge gap between 'what is required' and 'what is actually achieved' (Mathew & Mishra 2010). All these result in poor academic performance of SWHI in schools. Sustaining the linguistically weak SWHI in schools for a longer period of time is a serious concern. The issue of late identification and intervention of hearing loss in children further compounds the problem. Very often, late identified and intervened SWHI in schools find themselves as misfit in participating in the educational practices. All these are reflected on their literacy development performance (Mathew & Mishra 2010) particularly in reading and writing.

The school curriculum is yet another serious issue in the education of SWHI. Unlike in some of the western countries, schools in India do not follow a flexible curriculum for children with hearing impairment. The special schools adopt the same regular school curricula for teaching the children with hearing impairment. The curriculum prescribed for each class is not flexible with respect to its' content, activity, time, language learning outcomes and evaluation system (Wadadekar, 2002). The curriculum including the language, subjects, teaching methods and evaluation practiced in special schools is developed on the basis of their hearing counterparts. Difficulty further creeps in, when these students are forced to learn various subjects and to appear for an evaluation/examination that has a strong language foundation. Hence, SWHI with limited language proficiency find it hard to cope up in the prescribed curriculum. This leaves little space for these students to blossom. Though teachers make various types of adaptations and accommodations in curriculum and teaching-learning practices (Wadadekar, 2002), but the most of the SWHI do not reap the benefits and face literacy challenges.

Both special schools and general schools follow paper–pencil (written) evaluation practices for assessing the children with hearing impairment. In specific, evaluation of school subjects is generally done through written tests, and the achievement is measured in terms of students' abilities in expressing the knowledge gained through correct written language. Due to language and literacy concerns, SWHI face difficulties in expressing the knowledge gained through language.

1.0.3 Writing skills of SWHI

Literacy skills particularly writing skills play an important role in everyone's life. Very often it is use as a tool for self expression and helps in meeting the various functions of life like heuristic regulatory personal instrumental imaginative etc however the ability to perform through written work is critical for academic success and participation in the society. Learning to write is hard for all children. This is even harder for majority of the children with hearing impairment. Rinaldi & Caselli (2009) reported that deaf children with hearing parents display a general delay with respect to the onset of language, as well as slower progress in the development of the crucial language skills. They continue to lag behind hearing peers even in adolescence and display numerous errors at the sentence. The difficulties these children experience with reading lead them to a limited exposure to models of good writing. Very often it is observe that the teachers of CWHI adopt strategies limited to writing on a sentence level, All these affect the mechanics of writing like legibility, spelling, handwriting, quality, punctuation and grammar is affected in many children with hearing impairment. Apart these, SWHI exhibit difficulty with cohesion of ideas in writing. Very often, they communicate only the main ideas but could not elaborate or provide details in their writing. The text they produced has few redundancies and also few cohesive devices to tie text together (Yoshinaga -Itano et al., 1996a, and 1996b). It is observed that, although children with hearing impairment increase their use of cohesion as grade level increases, their lexical cohesions consisted mainly of word repetition (Maxwell and Falick, 1992). Thus a wide variety of errors are found in written language of SWHI.

2.0 Need & Rationale

Out of many skills that children need for education, writing is most important. Writing is not only the words which the child writes on the piece of paper, it is the effective communication of complex ideas in the simplest form of words that every layman can understand. That is why it is the most important skill that the SWHI need in school life. Writing skill is also important for academics. Writing especially in the present education system has become the essential skill as the students move from the one class to another. Without the writing skills, it is very hard to survive in the competitive environment of learning. Research studies documented reveals that the writing skills of school-age SWHI shows considerable delay as compared with hearing classmates (Jayaram, 2003).The SWHI make slower progress than hearing children and the frequency of production of several syntactical structures differs significantly from that of the hearing comparison group (Yoshinaga-Itano et al., 1996b). Not surprisingly, SWHI continue to lag behind hearing peers in their syntactic constructions even in adolescence (Musselman and Szanto, 1998). Sentences written by them tend to be shorter (ie. contains fewer words) and contain fewer conjoined and subordinate clauses (Myklebust,1964). Grammatical errors frequently appear in their writing. They tend to reiterate words and phrases within a discourse and use more articles and nouns and fewer adverbs and conjunctions (Simmons, 1962; Myklebust, 1964).

Over the years, concentrated efforts have been made by the special and general educators to improve the writing skills of SWHI. The early intervention programmes put in their full concentration on the development of reading and writing skills in CWHI through language mediated activities. Secondly, the proponents of inclusive/mainstream education for SWHI believe that inclusive/mainstream education is beneficial for improving the literacy skills as the CWHI. Though research studies have been carried out in various states, no such attempt was made in the state of Kerala to study the written language skills of CWHI . With Kerala having the highest literacy rate in the country. a study of this kind will help us to identify the strengths and weaknesses of CWHI in terms of their writing skills and the common errors they make. This study will also help the educational planners to plan remedial /alternate skill development

programs if required for SWHI which in turn facilitate their further education in schools and colleges. Also, the terms "Special" and "Inclusive" have to be operationally defined before making any comparison. Compared to the special education system, **inclusive education focuses not only on the students with special needs but others as well**. Therefore, we consider the inclusive approach as 'education for all'. **Special education** is the practice of providing **individualised instruction** and support to **students with disabilities or learning difficulties.** It is designed to be need-based and individualised, which means that every student in special education will have a different plan depending on their needs, abilities and goals. Both special schools and general schools follow paper–pencil (written) evaluation practices for assessing the children with hearing impairment. In specific, evaluation of school subjects is generally done through written tests, and the achievement is measured in terms of students' abilities in expressing the knowledge gained through correct written language. Due to language and literacy concerns, SWHI face difficulties in expressing the knowledge gained through language.

The study is thus stated as:

"ASSESSMENT OF WRITTEN LANGUAGE SKILLS OF STUDENTS WITH HEARING IMPAIRMENT IN SPECIAL AND INCLUSIVE SCHOOLS AND EFFECT OF INTERVENTIONAL STRATEGIES"

3.0 Aim

The central aim was to analyze the written language samples and study the written language skills of SWHI in special and mainstream educational set ups on various parameters selected for the present study

4.0 Variables of the Study

Independent Variable- Student with Hearing Impairment (SWHI), Special School (SS) Mainstream School (MS)

Dependant Variable- Written Language Skills

5.0 Objectives

The Main Objectives of the present study was:

5.01. To assess and compare the Written language Skills of SWHI in Special and Mainstream Schools.

5.02. To assess the Impact of Intervention on improvement of Written Language Skills of SWHI in Special and Mainstream Schools.

-for assessment the written language skills were divided to six aspects such as

- Qualitative Analysis of Sentences (QAS).
- Productivity of Language (PL)
- Appropriate Use of Lexical Categories (AULC).
- Complexity of Language(CL).
- Error Analysis (EA)
- Beyond the Sentence Analysis (BSA)

Hence the sub objectives is discussed as follows

5.01To study if the number of analyzable sentences increase over a period of one academic year while describing the familiar and non- familiar pictures in total in the students across different Types of Educational Set up taken together.

5.0.2 To study if the sentence length of students increases over a period of one academic year while describing the familiar and non- familiar pictures when all students from different Type of Educational Set up are taken together.

5.0.3 To study if the appropriate usage of Lexical Categories of students increases over a period of one academic year while describing the familiar and non- familiar pictures when all students from different Type of Educational Set up are taken together.

5.04 To study if the complexity of sentences of students increase over a period of one academic year while describing the familiar and non- familiar pictures when all students from different Type of Educational Set up are taken together.

5.05 To study if the errors in sentences of students decreases over a period of one academic year while describing the familiar and non- familiar pictures when all students from different Type of Educational Set up are taken together.

5.06 To study if the incidental writing (Beyond the sentence Analysis) of students increases over a period of one academic year while describing the familiar and non- familiar pictures when all students from different Type of Educational Set up are taken together.

6.0 Hypotheses formulated for the Study

6.0.1 In terms of written language skills, there is no significant difference in the performance of SWHI studying in special and mainstream schools at all levels .

6.0.2 In terms of Qualitative Analysis of Sentences, there is no significant difference in the performance SWHI studying in special and mainstream schools

6.0.3 In terms of Productivity of Language there is no significant difference in the performance of SWHI studying in special and mainstream schools

6.0.4 In terms of Appropriate use of Lexical Categories, there is no significant difference in the performance of SWHI studying in special and mainstream schools .

6.0.5 In terms of Complexity of Language, there is no significant difference in the performance of SWHI studying in special and mainstream schools .

6.0.6 In terms of Error Analysis, there is no significant difference in the performance of SWHI studying in special and mainstream schools .

6.0.7 In terms of Beyond the Sentence Analysis, there is no significant difference in the performance of SWHI studying in special and mainstream schools

6.0.8 The different types of sentences used by SWHI studying in mainstream schools will be more than that of their peers in special schools.

6.0.9 In terms of written language errors, SWHI studying in mainstream schools will have less number of *error types* as compared to their peers in special schools.

7.0 Research questions

This research attempts to answer the following questions:

7.01 After the learning of one academic year, does the mean scores of 'analyzable sentences' of students from different educational setup increase significantly?
7.02 After the learning of one academic year, does the mean scores of 'mean sentence length' of students from different educational setup increase significantly?
7.03 After the learning of one academic year, does the mean scores of 'appropriate use of lexical categories' of students from different educational setup increase significantly?
7.04 What percentage of SWHI studying in special schools have (i) good, (ii) average and (iii) poor written language skills?
7.05 After the learning of one academic year, does the mean scores of 'complexity of sentences' of students from different educational setup increase significantly?
7.06 After the learning of one academic year, does the mean scores of 'error analysis' of students from different educational setup decrease significantly?
7.07 After the learning of one academic year, does the mean scores of 'beyond the sentence analysis' of students from different educational setup increase significantly?
7.08 What percentage of SWHI studying in mainstream schools have (i) good, (ii) average and (iii) poor written language skills ?

8.0 Delimitations of the study

i. The study is limited to the two districts of the state of Kerala
ii. Only SWHI from 5^{th} and 6^{th} grades were considered
iii. Schools following state syllabus was only considered
iv. Only students studying in malayalam medium was considered.
v. No children with other disabilities were considered.

vi. Of the linguistic factors of written language, handwriting was not considered.

9.0 Methodology

9.0.1 Design: Quasi Experimental Study

9.0.2 Sample:

Group-A: Students with hearing impairment studying in class V and VI in Special schools

Group-B: Students with hearing impairment studying in Class V and VI in Inclusive schools

9.0.3 Sample size:

Group-A: 59 Students with Hearing Impairment from Special Schools

Group-B: 34 Students with Hearing Impairment from Inclusive Schools

9.0.4 Method of sample selection: Systematic random sampling

9.0.5 Criteria for selection

Age Range : 10-14 years

School Age : 5-7 years

Grade : 5^{th} and 6^{th}

Hearing Loss : 85 dB or more in the better ear

Type : Govt and Govt Aided

Medium of Instruction : Malayalam

9.0.6 Tools used for data collection

(1) Adapted Language Improvement Indicator (LII) (Huddar. A, 2004)
(2) Investigator developed Intervention Worksheets.
(3) Questionnaires for validity and reliability check of Intervention worksheets.

(4) Questionnaire for validity of Lesson Plans.

(5) Questionnaire for validity of Teacher Training Module.

(6) Questionnaire for checking social validity of the Intervention.

9.0.7 Data Collection

i. Consent from Dept of Gen Education, Gov. of Kerala was be obtained
ii. Consent from schools were be obtained
iii. Consent from parents of SWHI was be obtained
iv. Upon that, the researcher individually administered the tests on the selected samples of group A & B
v. Written language samples of group A & B will be collected separately for evaluation

LII was developed by Dr Huddar. A in the year 2004. The tool was developed for Marathi Language. The investigator adapted the tool for usage in Malayalam. The adapted tool was checked for validity and reliability. Pilot study of the tool was done and needed changes were made. After the pilot study pre test of the selected subjects were taken. Appropriate instructions were given after the investigator gave a general demonstration on how to write. The familiar picture was presented first and then the Non-familiar at an interval of five minutes. A maximum of 20 min were allotted for each picture. Not more than nine students were allowed to take the test at a time. The written samples were analysed and recorded in a score sheet. Completing the pre test the investigator entered into the phase of developing intervention work sheets. Eighty work sheets drafted focusing of the different aspects like Planning stories, Letter formation, Punctuation marks, Expanding their vocabulary, Past and present tense, Reading and Writing in Functional Situation, Sentence Structure, Passage Comprehension. Content analysis was done, appropriate pictures were included. Lay out was formatted and content validation was done by experts. Face validity was also checked and the draft was finalised.

After finalising the work sheets lesson plans were prepared for each work sheet. Validation of lesson plans were done with the indicators completeness od identity, clarity of components, suitability of learning objectives, suitability of activities, suitability

of model and suitability of assessment. Teacher training modules were prepared and validated with the criteria of accuracy and content. The validated intervention worksheets were tested by a pilot study and needed modifications were made. After the necessary modification of the worksheets, intervention was started on a pre-planned schedule. The investigator herself did the intervention. The trained teachers acted as mentors and helped the investigator in the monitoring of the intervention. The intervention continued for a period of ten months. Formative assessment was done at the end of every third month. The Social Validity of the Intervention procedure was taken by the researcher. A total of eighty two participants, who were parents of SWHI, professionals in rehabilitation of SWHI took part the study. As per the data the parents and professionals showed an overall high satisfaction regarding the intervention procedure.

At the end of tenth month post test was taken according to the planned schedule. Delayed post test was conducted after three months of post test. No intervention was done during this time. The obtained written samples were analysed and tabulated on the score sheet. This was taken and statistically interpreted.

10 .0 Data Analysis, Results and Discussion

The data was analysed on three levels

Analysis Level I: General Linear Repeated Measures Model,

Statistical Package for the Social Sciences (SPSS) or STATDIRECT will be used for data analysis. For descriptive statistics like mean, median, standard deviation & percentage scores will be used. To determine whether the differences between groups are statistically significant inferential statistics like t test and ANACOVA was used. Here there were three within-subject factor -trials(with three level: Pretest, Post test and Delayed post test) and picture(with two levels: Familiar and Non familiar) and one between - subject factor (Type of educational set up: Special and Inclusive)

Analysis Level II: Categories based on the performance of Students

Learning status was measure in percentage as per the score sheet of the tool LII. The percentage was converted into Good, Fair and Poor categories accordingly.

Analysis Level III : Status of Learning

Individual scores were analysed to find the change in category. The percentage was converted to Progressed, Regressed and Unchanged categories.

The analysis was done for each linguistic aspect like

Qualitative Analysis of Sentences

Productivity of Language

Appropriate Use of Lexical Categories

Complexity of Language

Error Analysis and

Beyond the Sentence Analysis

As per the analysis it was found that there exists no significant difference in the written language skills of SWHI in Special Schools as well as Inclusive Schools. Also the Intervention has improved the performance of students in both type of set ups. Hence the null hypothesis was rejected.

Finally to summarise the result:

Analysis⟶	School	LEVEL I		LEVEL II		LEVEL III	
		Improvement (Pre-Test to Delayed Post Test)	Effect of Educational Type	Performance of SWHI in terms of Written Language		Progress of SWHI in terms of learning of Written Language	
Linguistic Aspect ↓				Familiar Picture	Non-Familiar Picture	Familiar Picture	Non-Familiar Picture
Qualitative Analysis of Sentences	SS	YES	NO	POOR	POOR	PROGRESSED	PROGRESSED
	IS	YES		FAIR	FAIR	PROGRESSED	PROGRESSED
Productivity of Languages	SS	YES	YES	FAIR	POOR	PROGRESSED	PROGRESSED
	IS	NO		POOR	POOR	NOT PROGRESSED	NOT PROGRESSED
Appropriate use of Lexical Categories	SS	YES	NO	FAIR	FAIR	PROGRESSED	PROGRESSED
	IS	YES		POOR	POOR	PROGRESSED	NOT PROGRESSED
Complexity of	SS	NO	YES	POOR	POOR	PROGRESSED	NOOT PROGRESSED

Language	IS	YES		FAIR	POOR	PROGRESSED	PROGRESSED
Error Analysis	SS	YES	YES	FAIR	FAIR	PROGRESSED	PROGRESSED
	IS	NO		POOR	POOR	NOT PROGRESSED	NOT PROGRESSED
Beyond the Sentence Analysis	SS	YES	YES	GOOD	FAIR	PROGRESSED	PROGRESSED
	IS	YES		POOR	FAIR	PROGRESSED	NOT PROGRESSED

In the present study SWHI from Special Schools performed better in terms of Written Language than SWHI from Inclusive Schools. The analysis showed that most of the students from both the set ups were in `Poor` category during Pre-Test. This is indicative of under-functioning of the school set- ups inspite of the type, pertaining to teaching language in general and written language in particular. After intervention for ten months the Written Language Skills of SWHI from Special Schools as well as Inclusive Schools has improved to a measurable extent. This indicates the effectiveness of the Intervention done**.** SWHI from the Inclusive Schools has performed far below the expected levels even though they have improved after intervention. Now it is time to put up these missing links together and complete the picture appropriately. We as teachers should take the responsibility to put a better step ahead to help those students who are dependent on us on their future.

11.0 Results and policy implications

Language is key to education. The school curricula are developed on a strong language foundation. Hence language skills in students are essential for pursuing education. Considering the importance of language in educating SWHI, the research study will come up with the *strengths and weaknesses in written language skills* of primary SWHI studying in special and mainstream schools. It is expected that SWHI from both educational set up have linguistic difficulties and their written language samples will have many errors .The result of the study will facilitate the policy makers to draw a clear picture of the current linguistic level of students with disabilities in different types of educational setting at different levels. This will facilitate them to amend the existing curricula, acts, revise its schemes and polices, and to make a better plan of

action thereby facilitating and promoting language skills of SWHI in schools. This will further help in designing remedial programmes for improving the linguistic skills of SWHI. This will also aid in allowing the SWHI to express through alternate modes like sign language. This will also help in developing a plus curriculum for linguistically weak SWHI for improving their language skills.

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